

WHAT IS CLAIMED IS:

1. A metal oxynitride electrode catalyst comprising an oxynitride containing at least one transition metal element selected from the group consisting of La, Ta, Nb, Ti, and Zr, the metal oxynitride electrode catalyst being used at a potential of 0.4 V or higher relative to the reversible hydrogen electrode potential in an acidic electrolyte.
2. The metal oxynitride electrode catalyst according to Claim 1, wherein the metal oxynitride electrode catalyst is dispersed as fine particles on a catalyst carrier which is an electronically conductive powder.
3. The metal oxynitride electrode catalyst according to Claim 1, wherein the metal oxynitride electrode catalyst is used as an electrode catalyst for fuel cells using an acidic electrolyte.